

PC-0022 CIP

<110> Tang, Y. Tom  
Walker, Michael G.

<120> GROWTH-RELATED INFLAMMATORY AND IMMUNE RESPONSE PROTEIN

<130> PC-0022 CIP

<140> To Be Assigned

<141> Herewith

<160> 14

<170> PERL Program

<210> 1

<211> 464

<212> PRT

<213> Homo sapiens

<220>

<221> misc\_feature

<223> Incyte ID No: 040371.3

<400> 1

Met Glu Thr Leu Ser Phe Pro Arg Tyr Asn Val Ala Glu Ile Val  
1 5 10 15  
Ile His Ile Arg Asn Lys Ile Leu Thr Gly Ala Asp Gly Lys Asn  
20 25 30  
Leu Thr Lys Asn Asp Leu Tyr Pro Asn Pro Lys Pro Glu Val Leu  
35 40 45  
His Met Ile Tyr Met Arg Ala Leu Gln Ile Val Tyr Gly Ile Arg  
50 55 60  
Leu Glu His Phe Tyr Met Met Pro Val Asn Ser Glu Val Met Tyr  
65 70 75  
Pro His Leu Met Glu Gly Phe Leu Pro Phe Ser Asn Leu Val Thr  
80 85 90  
His Leu Asp Ser Phe Leu Pro Ile Cys Arg Val Asn Asp Phe Glu  
95 100 105  
Thr Ala Asp Ile Leu Cys Pro Lys Ala Lys Arg Thr Ser Arg Phe  
110 115 120  
Leu Ser Gly Ile Ile Asn Phe Ile His Phe Arg Glu Ala Cys Arg  
125 130 135  
Glu Thr Tyr Met Glu Phe Leu Trp Gln Tyr Lys Ser Ser Ala Asp  
140 145 150  
Lys Met Gln Gln Leu Asn Ala Ala His Gln Glu Ala Leu Met Lys  
155 160 165  
Leu Glu Arg Leu Asp Ser Val Pro Val Glu Glu Gln Glu Glu Phe  
170 175 180  
Lys Gln Leu Ser Asp Gly Ile Gln Glu Leu Gln Gln Ser Leu Asn  
185 190 195  
Gln Asp Phe His Gln Lys Thr Ile Val Leu Gln Glu Gly Asn Ser  
200 205 210  
Gln Lys Lys Ser Asn Ile Ser Glu Lys Thr Lys Arg Leu Asn Glu  
215 220 225  
Leu Lys Leu Ser Val Val Ser Leu Lys Glu Ile Gln Glu Ser Leu  
230 235 240  
Lys Thr Lys Ile Val Asp Ser Pro Glu Lys Leu Lys Asn Tyr Lys

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|                 |                     |                     |     |  |     |
|-----------------|---------------------|---------------------|-----|--|-----|
|                 | 245                 |                     | 250 |  | 255 |
| Glu Lys Met Lys | Asp Thr Val Gln Lys | Leu Lys Asn Ala Arg | Gln |  |     |
|                 | 260                 |                     | 265 |  | 270 |
| Glu Val Val Glu | Lys Tyr Glu Ile Tyr | Gly Asp Ser Val Asp | Cys |  |     |
|                 | 275                 |                     | 280 |  | 285 |
| Leu Pro Ser Cys | Gln Leu Glu Val Gln | Leu Tyr Gln Lys Lys | Ile |  |     |
|                 | 290                 |                     | 295 |  | 300 |
| Gln Asp Leu Ser | Asp Asn Arg Glu Lys | Leu Ala Ser Ile Leu | Lys |  |     |
|                 | 305                 |                     | 310 |  | 315 |
| Glu Ser Leu Asn | Leu Glu Asp Gln Ile | Glu Ser Asp Glu Ser | Glu |  |     |
|                 | 320                 |                     | 325 |  | 330 |
| Leu Lys Lys Leu | Lys Thr Glu Glu Asn | Ser Phe Lys Arg Leu | Met |  |     |
|                 | 335                 |                     | 340 |  | 345 |
| Ile Val Lys Lys | Glu Lys Leu Ala Thr | Ala Gln Phe Lys Ile | Asn |  |     |
|                 | 350                 |                     | 355 |  | 360 |
| Lys Lys His Glu | Asp Val Lys Gln Tyr | Lys Arg Thr Val Ile | Glu |  |     |
|                 | 365                 |                     | 370 |  | 375 |
| Asp Cys Asn Lys | Val Gln Glu Lys Arg | Gly Ala Val Tyr Glu | Arg |  |     |
|                 | 380                 |                     | 385 |  | 390 |
| Val Thr Thr Ile | Asn Gln Glu Ile Gln | Lys Ile Lys Leu Gly | Ile |  |     |
|                 | 395                 |                     | 400 |  | 405 |
| Gln Gln Leu Lys | Asp Ala Ala Glu Arg | Glu Lys Leu Lys Ser | Gln |  |     |
|                 | 410                 |                     | 415 |  | 420 |
| Glu Ile Phe Leu | Asn Leu Lys Thr Ala | Leu Glu Lys Tyr His | Asp |  |     |
|                 | 425                 |                     | 430 |  | 435 |
| Gly Ile Glu Lys | Ala Ala Glu Asp Ser | Tyr Ala Lys Ile Asp | Glu |  |     |
|                 | 440                 |                     | 445 |  | 450 |
| Lys Thr Ala Glu | Leu Lys Arg Lys Met | Phe Lys Met Ser Thr |     |  |     |
|                 | 455                 |                     | 460 |  |     |

<210> 2

<211> 1979

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<223> Incyte ID No: 040371.3

<400> 2

|            |            |            |            |            |            |     |
|------------|------------|------------|------------|------------|------------|-----|
| gggacttcca | gtaggaggcg | gcatgtttga | aaagtgatga | cggttgacgt | ttgctgattt | 60  |
| ttgactttgc | ttgtagctgc | tccccgaact | cgccgtcttc | ctgtcggcgg | ccggcactgt | 120 |
| aggtgagcgc | gagaggacgg | aggaaggaag | cctgcagaca | gacgccttct | ccatcccaag | 180 |
| gcgcgggcag | gtgccgggac | gctgggcctg | gcggtgtttt | cgtcgtgctc | agcggtgagg | 240 |
| ggaggcggaa | gaaaccagag | cctgggagat | taacaggaaa | cttccaagat | ggaaactttg | 300 |
| tctttcccca | gatataatgt | agctgagatt | gtgattcata | ttcgcaataa | gatcttaaca | 360 |
| ggagctgatg | gtaaaaacct | caccaagaat | gatctttatc | caaatccaaa | gcctgaagtc | 420 |
| ttgcacatga | tctacatgag | agccttacaa | atagtatatg | gaattcgact | ggaacatttt | 480 |
| tacatgatgc | cagtgaactc | tgaagtcatg | tatccacatt | taatggaagg | cttcttacca | 540 |
| ttcagcaatt | tagttactca | tctggactca | tttttgccct | tctgccgggt | gaatgacttt | 600 |
| gagactgctg | atattctatg | tccaaaagca | aaacggacaa | gtcgggtttt | aagtggcatt | 660 |
| atacaattta | tctacttcag | agaagcatgc | cgtgaaacgt | atatggaatt | tctttggcaa | 720 |
| tataaatcct | ctgcggacaa | aatgcaacag | ttaaacgccg | cacaccagga | ggcattaatg | 780 |
| aaactggaga | gacttgattc | tgttccagtt | gaagagcaag | aagagttcaa | gcagctttca | 840 |
| gatggaattc | aggagctaca | acaatcacta | aatcaggatt | ttcatcaaaa | aacgatagtg | 900 |
| ctgcaagagg | gaaattccca | aaagaagtca | aatatttcag | agaaaaccaa | gcgtttgaat | 960 |

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```
gaactaaaat tgtcgggtggt ttctttgaaa gaaatacaag agagtttgaa aacaaaaaatt 1020
gtggattctc cagagaagtt aaagaattat aaagaaaaaa tgaaagatac ggtccagaag 1080
cttaaaaatg ccagacaaga agtgggtggag aaatatgaaa tctatggaga ctcagttgac 1140
tgctgcctt catgtcagtt ggaagtgcag ttatatcaaa agaaaataca ggacctttca 1200
gataataggg aaaaattagc cagtatctta aaggagagcc tgaacttgga ggaccaaatt 1260
gagagtgatg agtcagaact gaagaaattg aagactgaag aaaattcgtt caaaagactg 1320
atgattgtga agaaggaaaa acttgccaca gcacaattca aaataaataa gaagcatgaa 1380
gatgttaagc aatacaaacg cacagtaatt gaggattgca ataaagttca agaaaaaaga 1440
ggtgctgtct atgaacgagt aaccacaatt aatcaagaaa tccaaaaaat taaacttgga 1500
attcaacaac taaaagatgc tgctgaaagg gagaaactga agtcccagga aatattttcta 1560
aacttgaaaa ctgctttgga gaaataccac gacggtattg aaaaggcagc agaggactcc 1620
tatgctaaga tagatgagaa gacagctgaa ctgaagagga agatgttcaa aatgtcaacc 1680
tgattaacaa aattacatgt ctttttgtaa atggcttgcc atcttttaat tttctattta 1740
gaaagaaaag ttgaagcgaa tggaaagtatc agaagtacca aataatgttg gcttcatcag 1800
tttttataca ctctcataag tagttaataa gatgaattta atgtaggctt ttattaattt 1860
ataattaaaa taacttgtgc agctattcat gtctctactc tgccccttgt tgtaaatagt 1920
ttgagtaaaa caaaactagt tacctttgaa atatatatat ttttttctgt tacaaaaaa 1979
```

<210> 3  
<211> 230  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<223> Incyte ID No: 6257588H1

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<400> 3
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ttgactttgc ttgtagctgc tccccgaact cgccgtcttc ctgtcggcgg ccggcactgt 120
aggtgagcgc gagatgacgg aggaaggaag cctgcagaca gacgccttct ccatcccaag 180
gcgcgggcag gtgccgggac gctgggcctg gcggtgtttt cgctcgtgctc 230
```

<210> 4  
<211> 535  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<223> Incyte ID No: 2914466F6

<220>  
<221> unsure  
<222> 117, 469  
<223> a, t, c, g, or other

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<400> 4
cggcatgttt gaaaagtgat gacggttgac gtttgctgat ttttgacttt gcttgtagct 60
gctccccgaa ctgcgcgtct tcctgtcggc ggccggcact gtaggtgagc gcgagangac 120
ggaggaagga agcctgcaga cagacgcctt ctccatccca aggcgcgggc aggtgccggg 180
acgctgggac tggcgggtgtt ttctgtcgtg tcagcgggtg gaggaggcgg aagaaaccag 240
agcctgggag attaacagta aacttccaag atggaaactt tgtctttccc cagatataat 300
gtagctgaga ttgtgattca tattcgcaat aagatcttaa caggagctga tggtaaaaaa 360
ctcaccaaga atgatcttta tccaaatcca aagcctgaag tcttgcacat gatctacatg 420
agagccttac aaatagtcta tggaaattcga ctggaacatt tttacatgnt gccagtgaac 480
```

PC-0022 CIP

tctgaagtca tgtatccaca tttaatggaa ggctcttacc attcagcaat ttagt 535

<210> 5  
<211> 384  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<223> Incyte ID No: 7702863H2

<400> 5  
ctgtcggcgg ccggcactgt aggtgagcgc gagaggacgg aggaaggaag cctgcagaca 60  
gacgccttct ccatcccaag gcgcggggcag gtgccgggac gctgggcctg gcggtgtttt 120  
cgctcgtgctc agcgggtggga ggaggcggaa gaaaccagag cctgggagat taacaggaaa 180  
cttccaagat ggaaactttg tctttcccca gatataatgt agctgagatt gtgattcata 240  
ttcgcaataa gatcttaaca ggagctgatg gtaaaaacct caccaagaat gatctttatc 300  
caaatccaaa gcctgaagtc ttgcacatga tctacatgag agcettacaa atagtctatg 360  
gaattcgact ggaacatttt taca 384

<210> 6  
<211> 542  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<223> Incyte ID No: 6421045H1

<400> 6  
ccgggacgct gggcctggcg gtgttttctg cgtgctcagc ggtgggagga ggcggaagaa 60  
accagagcct gggagattaa caggaaactt ccaagatgga aactttgtct ttccccagat 120  
ataatgtagc tgagattgtg attcatattc gcaataagat cttaacagga gctgatggta 180  
aaaacctcac caagaatgat ctttatccaa atccaaagcc tgaagtcttg cacatgatct 240  
acatgagagc cttacaaata gtatatggaa ttcgactgga acatttttac atgatgccag 300  
tgaactctga agtcatgtat ccacatttaa tggaaggctt cttaccattc agcaatttag 360  
ttactcatct ggactcattt ttgcctatct gccgggtgaa tgactttgag actgctgata 420  
ttctatgtcc aaaagcaaaa cggacaagtc gggtttttaag tggcattatc aactttattc 480  
acttcagaga agcatgccgt gaaacgtata tggaatttct ttggcgatat aaatcctctg 540  
cg 542

<210> 7  
<211> 522  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<223> Incyte ID No: 3727909T1

<220>  
<221> unsure  
<222> 119, 123-124, 390, 415, 488-489, 497  
<223> a, t, c, g, or other

<400> 7

PC-0022 CIP

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caaactctct tgtatttctt tcaaagaaac caccgacaat tttagttcat tcaaacgctt 60
ggttttctct gaaatatttg acttcttttg ggaatttccc tcttgagca ctatcgtnt 120
ttntgaaaa tcctgattta gtgattgttg tagctcctga attccatctg aaagctgctt 180
gaactcttct tgctcttcaa ctggaacaga atcaagtctc tccagtttca ttaatgcctc 240
ctggtgtgcg gcgtttaact gttgcatttt gtccgcagag gatttatatt gccaaagaaa 300
ttccatatac gtttcacggc atgcttctct gaagtgaata aagttgataa tgccacttaa 360
aaaccgactt gtccgttttg cttttggacn tagaatatca gcagtctcaa agtcnttcac 420
ccggcagata ggcaaaaatg agtccagatg agtaactaaa ttgctgaatg gtaagaagct 480
cgagcctnnt ttcccnagc ttaacgtacc gcgtgcatgc ga 522
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<210> 8

<211> 595

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<223> Incyte ID No: 6562592H1

<400> 8

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cttcggcaat atttctgttc cagttgaaga gcaagaagag ttcaagcagc tttcagatgg 60
tattcaggag ctacaacaat cactaaatca ggattttcat caaaaaacga tagtgctgca 120
agagggaat tcccaaaaga agtcaaata ttcagagaaa accaagcgtt tgaatgaact 180
aaaattgtcg gtggtttctt tgaaagaaat acaagagagt ttgaaaacaa aaattgtgga 240
ttctccagag aagttaaaga attataaaga aaaaatgaaa gatacgggcc agaagcttaa 300
aaatgccaga aagtgggtgga gaaatatgaa atctatggag actcagttga ctgcctgcct 360
tcatgtcagt tggaagtgca gttatatcaa aagaaaatac aggaccttcc agataatagg 420
gaaaaattag ccagtatctt aaaggagagc ctgaacttgg aggaccaa ttagagagtga 480
gagtcagaac tgaagaaatt gaagactgaa gaaaattcgt tcaaaagact gatgattgtg 540
aagaaggcaa aacttgccac agcacaattc acaataaatt agaagcatga agatg 595
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<210> 9

<211> 581

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<223> Incyte ID No: 6729631H1

<400> 9

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ggaaattccc aaaagaagtc aaatatttca gagaaaacca agcgtttgaa tgaactaaaa 60
ttgtcgggtg tttctttgaa agaaatacaa gagagtggga aaacaaaaat tgtggattct 120
ccagagaagt taaagaatta taaagaaaaa atgaaagata cgggccagaa gcttaaaaaa 180
gccagacaag aagtgggtgga gaaatatgaa atctatggag actcagttga ctgcctgcct 240
tcatgtcagt tggaagtgca gttatatcaa aagaaaatac aggaccttcc agataatagg 300
gaaaaattag ccagtatctt aaaggagagc ctgaacttgg aggaccaa ttagagagtga 360
gagtcagaac tgaagaaatt gaagactgaa gaaaattcgt tcaaaagact gatgattgtg 420
aagaaggaaa aacttgccac agcacaattc aaaataaata agaagcatga agatgtgtag 480
caatacaaac gcacagtaat tgaggattgc cataaagttc cagaaaaaag aggtgctgtc 540
tatgaacgag taaccacaat taatccagaa atccaaaaaa t 581
```

<210> 10

<211> 511

<212> DNA

<213> Homo sapiens

PC-0022 CIP

<220>

<221> misc\_feature

<223> Incyte ID No: 7702863J1

<400> 10

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ctattttacaa caagggggcag agtagagaca tgaatagctg cacaagttat ttttaattata 120
aattaataaaa agcctacatt aaattcatct tattaactac ttatgagagt gtataaaaaac 180
tgatgaagcc aacattatct ggtacttctg atacttccat tcgcttcaac ttttctttct 240
aaatagaaaa ttaaaagatg gcaagccatt taaaaaaga catgtaattt tgtaaatcag 300
gttgacattt tgaacatctt cctcttcagt tcagctgtct tctcatctat cttagcatag 360
gagtcctctg ctgccttttc aataccgtcg tggattttct ccaaagcagt tttcaagttt 420
agaaatattt cctgggactt cagtttctcc ctttcagcag catcttttag ttgttgaatt 480
ccaagtttaa ttttttggat ttcttgatta a 511
```

<210> 11

<211> 290

<212> DNA

<213> Mus musculus

<220>

<221> misc\_feature

<223> Incyte ID No: 700108016H1

<400> 11

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ggaggagact ccacaaatgg aaaccttgtc attcccaga tacaatgtag ctgagattgt 120
ggttcatatt cgcaataaac tactaacagg agccgatggc aaaaacctct ctaagaatga 180
tctttatcca aacccaaagc ccgatgtctt atacatgatc tacatgagag cttacaaat 240
agtgtatggg gtccggctgg agcatttcta catgatgcca gtgaacgcag 290
```

<210> 12

<211> 289

<212> DNA

<213> Rattus norvegicus

<220>

<221> misc\_feature

<223> Incyte ID No: 700227686H1

<400> 12

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caacggccgg tggattttag gagtttgctc ggtttgtaac tgctctttgg tgagctactg 60
ggactgcaga ctaggaggag actcccaaaa tggaaactct gtccttcccc agatacaaca 120
tagctgagat tgtagttcat attcgcaata aactgttaac tggagcggat ggcaaaaacc 180
tctccaagag cgatttttct ccaaaccgga agcctgaagt cctgtacatg atttacatga 240
gagccttaca gttagtgtat ggggtccggc tggagcattt ctacatgat 289
```

<210> 13

<211> 573

<212> DNA

<213> Rattus norvegicus

<220>

<221> misc\_feature

<223> Incyte ID No: 702436073T1

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<400> 13

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gtgtagcctg caaggccctg agttgtatcc cctatcacca agaaaaaac acaggagca 120
catggtcata aaaggacaga gaaccaatgg taccacgct agttagctga gactgcggtc 180
cttctattag cttcaatata actactccaa acagaaagcg acagcgccgt tttcgggtgg 240
ctgttgatca gggcggtcatt ttgaacatcc tcctcttcag ctccggcagtc ttccctccta 300
ttctagtaca gcactcctcc gtcgtcttct cgatgccctc atgggtacttc tccaaagcac 360
ttttcaagtc taccaagatt tcctgagact tcagttttctc ccgtttttcg gcgtctctta 420
gctgctgaat cccagattta atcttgtgga tgtcttgatt aatggcggtt acttgctcgc 480
agacagcatc tcttttttct tgaactttat tgcaatctct aaaaggggaac agagacacct 540
gacgtaacct ctcttaagca ttttaaaaac cat 573
```

<210> 14

<211> 464

<212> PRT

<213> Homo sapiens

<220>

<221> misc\_feature

<223> Incyte ID No: HW051

<220>

<221> unsure

<222> 10, 20, 30, 39, 70, 87, 102, 115, 126, 145, 157, 170, 195, 224, 253, 306, 319, 339, 360, 378, 395

<223> unknown or other

<400> 14

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Met Glu Thr Leu Ser Phe Pro Arg Tyr Asn Ile Ala Glu Ile Val
  1          5          10          15
Val His Ile Arg Asn Lys Leu Leu Thr Gly Ala Asp Gly Lys Asn
          20          25          30
Leu Ser Lys Ser Asp Phe Leu Pro Asn Pro Lys Pro Glu Val Leu
          35          40          45
Tyr Met Ile Tyr Met Arg Ala Leu Gln Leu Val Tyr Gly Val Arg
          50          55          60
Leu Glu His Phe Tyr Met Met Pro Val Asn Ile Glu Val Met Tyr
          65          70          75
Pro His Ile Met Glu Gly Phe Leu Pro Val Ser Asn Leu Phe Phe
          80          85          90
His Leu Asp Ser Phe Met Pro Ile Cys Arg Val Asn Asp Phe Glu
          95          100          105
Ile Ala Asp Ile Leu Tyr Pro Lys Ala Asn Arg Thr Ser Arg Phe
          110          115          120
Leu Ser Gly Ile Ile Asn Phe Ile His Phe Arg Glu Thr Cys Leu
          125          130          135
Glu Lys Tyr Glu Glu Phe Leu Leu Gln Asn Lys Ser Ser Val Asp
          140          145          150
Lys Ile Gln Gln Leu Ser Asn Ala His Gln Glu Ala Leu Met Lys
          155          160          165
Leu Glu Lys Leu Asn Ser Val Pro Val Glu Glu Gln Glu Glu Phe
          170          175          180
Lys Gln Leu Lys Asp Asp Ile Gln Glu Leu Gln His Leu Leu Asn
          185          190          195
Gln Asp Phe Arg Gln Lys Thr Thr Leu Leu Gln Glu Arg Tyr Thr
          200          205          210
```

PC-0022 CIP

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Met | Lys | Ser | Asp | Phe | Ser | Glu | Lys | Thr | Lys | His | Val | Asn | Glu |
|     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     | 225 |
| Leu | Lys | Leu | Ser | Val | Val | Ser | Leu | Lys | Glu | Val | Gln | Asp | Ser | Leu |
|     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Lys | Ser | Lys | Ile | Val | Asp | Ser | Pro | Glu | Lys | Leu | Lys | Asn | Tyr | Lys |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |
| Glu | Lys | Met | Lys | Asp | Thr | Val | Gln | Lys | Leu | Arg | Ser | Ala | Arg | Glu |
|     |     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |
| Glu | Val | Met | Glu | Lys | Tyr | Asp | Ile | Tyr | Arg | Asp | Ser | Val | Asp | Cys |
|     |     |     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |
| Leu | Pro | Ser | Cys | Gln | Leu | Glu | Val | Gln | Leu | Tyr | Gln | Lys | Lys | Ser |
|     |     |     |     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |
| Gln | Asp | Leu | Ala | Asp | Asn | Arg | Glu | Lys | Leu | Ser | Ser | Ile | Leu | Lys |
|     |     |     |     | 305 |     |     |     |     | 310 |     |     |     |     | 315 |
| Glu | Ser | Leu | Asn | Leu | Glu | Gly | Gln | Ile | Asp | Ser | Asp | Ser | Ser | Glu |
|     |     |     |     | 320 |     |     |     |     | 325 |     |     |     |     | 330 |
| Leu | Lys | Lys | Leu | Lys | Thr | Glu | Glu | Asn | Ser | Leu | Ile | Arg | Leu | Met |
|     |     |     |     | 335 |     |     |     |     | 340 |     |     |     |     | 345 |
| Thr | Leu | Lys | Lys | Glu | Arg | Leu | Ala | Thr | Met | Gln | Phe | Lys | Ile | Asn |
|     |     |     |     | 350 |     |     |     |     | 355 |     |     |     |     | 360 |
| Lys | Lys | Gln | Glu | Asp | Val | Lys | Gln | Tyr | Lys | Arg | Thr | Met | Ile | Glu |
|     |     |     |     | 365 |     |     |     |     | 370 |     |     |     |     | 375 |
| Asp | Cys | Asn | Lys | Val | Gln | Glu | Lys | Arg | Asp | Ala | Val | Cys | Glu | Gln |
|     |     |     |     | 380 |     |     |     |     | 385 |     |     |     |     | 390 |
| Val | Thr | Ala | Ile | Asn | Gln | Asp | Ile | His | Lys | Ile | Lys | Ser | Gly | Ile |
|     |     |     |     | 395 |     |     |     |     | 400 |     |     |     |     | 405 |
| Gln | Gln | Leu | Arg | Asp | Ala | Glu | Lys | Arg | Glu | Lys | Leu | Lys | Ser | Gln |
|     |     |     |     | 410 |     |     |     |     | 415 |     |     |     |     | 420 |
| Glu | Ile | Leu | Val | Asp | Leu | Lys | Ser | Ala | Leu | Glu | Lys | Tyr | His | Glu |
|     |     |     |     | 425 |     |     |     |     | 430 |     |     |     |     | 435 |
| Gly | Ile | Glu | Lys | Thr | Thr | Glu | Glu | Cys | Cys | Thr | Arg | Ile | Gly | Gly |
|     |     |     |     | 440 |     |     |     |     | 445 |     |     |     |     | 450 |
| Lys | Thr | Ala | Glu | Leu | Lys | Arg | Arg | Met | Phe | Lys | Met | Pro | Pro |     |
|     |     |     |     | 455 |     |     |     |     | 460 |     |     |     |     |     |